

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1 2
2. AMENDMENT/MODIFICATION NO. P00001	3. EFFECTIVE DATE 12-Dec-2005	4. REQUISITION/PURCHASE REQ. NO. V562/00		5. PROJECT NO.(If applicable)
6. ISSUED BY DARPA CMO ATTN: MICHAEL D. BLACKSTONE 3701 N. FAIRFAX DR. ARLINGTON VA 22203-1714	CODE HR0011	7. ADMINISTERED BY (If other than item 6) DCMA DETROIT US ARMY TANK & AUTOMOTIVE COMMAND (TACOM) WARREN MI 48397-6000 CODE S2305A		
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) GENERAL DYNAMICS ADVANCED INFORMATION 1200 JOE HALL DRIVE YPSILANTI MI 48197-7523		9A. AMENDMENT OF SOLICITATION NO.		
		9B. DATED (SEE ITEM 11)		
		X 10A. MOD. OF CONTRACT/ORDER NO. HR0011-06-C-0034		
		X 10B. DATED (SEE ITEM 13) 02-Dec-2005		
CODE 1U2D5		FACILITY CODE		
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required)				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Mutual Agreement of the Parties				
D. OTHER (Specify type of modification and authority)				
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return <u>2</u> copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: kgrlgeri06154 The purpose of this modification is to incorporate an initial DD254 "Department of Defense Contract Security Classification Specification", dated 12 December 2005, as Attachment (2) to the contract. See page 2.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print) (b)(2)		15B. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) (b)(6) EMAIL: Michael.Blackstone@darpa.mil		
15C. DATE SIGNED (b)(2) 12/13/05		15D. DATE SIGNED (b)(6) 12/14/05		
EXCEPTION TO SF 30 APPROVED BY OIRM 11-84				

30-105-04

STANDARD FORM 30 (Rev. 10-83)
Prescribed by GSA
FAR (48 CFR) 53.243

PO

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

1. SECTION J - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS

The Table of Contents has changed

FROM:

Exhibit/Attachment Table of Contents

DOCUMENT TYPE	DESCRIPTION	PAGES	DATE
Exhibit A	CLIN 0001 Exhibit(s)	8	N/A
Statement of Work	PURDEME	4	12 October 2005

TO:

Exhibit/Attachment Table of Contents

DOCUMENT	DESCRIPTION	PAGES	DATE
Exhibit A	CLIN 0001 Exhibit(s)	8	N/A
Attachment (1)	PURDEME SOW	4	12 October 2005
Attachment (2)	DD254 - "Department of Defense Contract Security Classification Specification"	3	12 December 2005

2. Except as modified above, the terms and conditions of Contract No. HR0011-06-C-0034 shall remain unchanged and in full force and effect.

(End of Summary of Changes)

CONTRACT HR0011-06-C-0034
P00001

DD FORM 254
DEPARTMENT OF DEFENSE
CONTRACT SECURITY CLASSIFICATION SPECIFICATION

4 PAGES WITHHELD

AWARD/CONTRACT		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)		RATING		PAGE OF PAGES 1 26					
2. CONTRACT (Proc. Inst. Ident.) NO. HF0011-06-C-0034		3. EFFECTIVE DATE 02 Dec 2005		4. REQUISITION/PURCHASE REQUEST/PROJECT NO. V562/00							
5. ISSUED BY DARPA CMO ATTN: MICHAEL D. BLACKSTONE 3701 N. FAIRFAX DR. ARLINGTON VA 22203-1714		CODE HR0011		6. ADMINISTERED BY (If other than Item 5) DCMA DETROIT US ARMY TANK & AUTOMOTIVE COMMAND (TACOM) WARREN MI 48397-5000		CODE S2306A					
7. NAME AND ADDRESS OF CONTRACTOR (No., street, city, county, state and zip code) GENERAL DYNAMICS ADVANCED INFORMATION 1200 JOE HALL DRIVE YPSILANTI MI 48197-7523				8. DELIVERY [] FOB ORIGIN [X] OTHER (See below)							
				9. DISCOUNT FOR PROMPT PAYMENT Net 30 Days							
				10. SUBMIT INVOICES 1 (4 copies unless otherwise specified) TO THE ADDRESS SHOWN IN:		ITEM Section G					
CODE 1U2D5		FACILITY CODE									
11. SHIP TO/MARK FOR See Schedule		CODE		12. PAYMENT WILL BE MADE BY DFAS COLUMBUS CENTER NORTH ENTITLEMENT OPERATIONS P.O. BOX 182266 COLUMBUS OH 43218-2266		CODE HQ0337					
13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: [] 10 U.S.C. 2304(c)() [] 41 U.S.C. 253(c)()				14. ACCOUNTING AND APPROPRIATION DATA See Schedule							
15A. ITEM NO.		15B. SUPPLIES/ SERVICES		15C. QUANTITY		15D. UNIT		15E. UNIT PRICE		15F. AMOUNT	
		SEE SCHEDULE									
15G. TOTAL AMOUNT OF CONTRACT \$404,573.00											
16. TABLE OF CONTENTS											
(X)	SEC.	DESCRIPTION		PAGE(S)	(X)	SEC.	DESCRIPTION		PAGE(S)		
PART I - THE SCHEDULE					PART II - CONTRACT CLAUSES						
X	A	SOLICITATION/ CONTRACT FORM		1	X	I	CONTRACT CLAUSES		15 - 25		
X	B	SUPPLIES OR SERVICES AND PRICES/ COSTS		2	PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS						
X	C	DESCRIPTION/ SPECS/ WORK STATEMENT		3 - 4	X	J	LIST OF ATTACHMENTS		26		
X	D	PACKAGING AND MARKING		5	PART IV - REPRESENTATIONS AND INSTRUCTIONS						
X	E	INSPECTION AND ACCEPTANCE		6		K	REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS				
X	F	DELIVERIES OR PERFORMANCE		7 - 8		L	INSTRS, CONDS, AND NOTICES TO OFFERORS				
X	G	CONTRACT ADMINISTRATION DATA		9 - 10		M	EVALUATION FACTORS FOR AWARD				
X	H	SPECIAL CONTRACT REQUIREMENTS		11 - 14							
CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE											
17. [X] CONTRACTOR'S NEGOTIATED AGREEMENT Contractor is required to sign this document and return 2 copies to issuing office. Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.)						18. [] AWARD (Contractor is not required to sign this document.) Your offer on Solicitation Number _____ including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your offer, and (b) this award/contract. No further contractual document is necessary.					
19. NAME AND TITLE OF SIGNED (b)(2)						(b)(6)					
19B. NAME OF CONTRACTOR (b)(2)				19C. DATE SIGNED 5 Dec 05				20C. DATE SIGNED 5 Dec 2005			

Section B - Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	ESTIMATED COST	FIXED FEE	TOTAL EST. COST PLUS FIXED FEE
0001	PURDEME Seedling AO No. V562/00	(b)(4)	(b)(4)	\$404,573.00

The Contractor shall research/assess the performance impact of Prediction-Based Registration (PBR) in accordance with the Attachment 1 Statement of Work. Data deliverables/reports will be provided in accordance with Sections C and F, and Exhibit A.

ITEM NO	AMOUNT
000101	
AO No. V562/00	
ACRN AA	\$404,573.00

Section C - Descriptions and Specifications**CLAUSES INCORPORATED BY FULL TEXT****C-1 Scope of Work**

(a) The Contractor shall furnish the necessary personnel, materials, facilities and other services as may be required to perform Contract Line Item Number (CLIN) 0001 in accordance with the Statement of Work, Attachment 1 hereto, and as specified in the Contractor's proposal entitled "Precision Urban Registration and Digital Elevation Model Extraction (PURDEME)", dated 12 October 2005 (as amended), copies of which are in possession of both parties.

(b) In the event of an inconsistency between the provisions of this contract and the Contractor's proposal, the inconsistency shall be resolved by giving precedence in the following order: (1) the contract, (2) the attachments to the contract, and then (3) the Contractor's proposal.
(end of clause)

C-2 Reports and Other Deliverables

(a) All technical reports delivered by the Contractor in the performance of the contract shall be considered "Technical Data" as defined in Section I contract clauses entitled "Rights in Technical Data - Noncommercial Items" and "Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation." The Government shall receive "unlimited rights" to this technical data, as defined in these clauses.

(b) In addition to those reports required by the Exhibit A, Contract Data Requirements List, the following report(s) must also be submitted as specified below:

1. FINAL REPORT

This report, prepared in accordance with DFARS 252.235-7011, shall document the results of the complete effort as set forth in the Statement of Work, Attachment 1 hereto. Title pages shall include a disclaimer worded substantially as follows:

"The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the official policies, either expressly or implied, of the Defense Advanced Research Projects Agency or the U.S. Government."

(1) The Final Technical Report summary shall include:

Task Objectives
Technical Problems
General Methodology (i.e., literature review, laboratory experiments, surveys, etc.)
Technical Results
Important Findings and Conclusions
Significant Hardware Development
Special Comments
Implications for Further Research

(2) All papers and articles published as a result of DARPA sponsored research shall include a statement reflecting that sponsorship.

(3) Distribution Statement B applies.

2. ADDITIONAL MISC. DELIVERABLES

The Contractor shall also deliver those items listed in the Contract Attachment (1) - Statement of Work under the paragraph entitled "Deliverables", as applicable. The Contractor shall adhere to the schedule, as applicable, own in the Statement of Work. Briefing materials (hard and softcopy) for all briefings given to the Government shall be provided in the Contractor's format.

(end of clause)

Section D - Packaging and Marking

CLAUSES INCORPORATED BY FULL TEXT

D-1 Packaging and Marking

- (a) All items shall be preserved, packaged, packed and marked in accordance with best commercial practices to meet the packing requirements of the carrier, and to ensure safe delivery at destination.
(end of clause)

Section E - Inspection and Acceptance

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at destination by the Contracting Officer's Representative (COR) identified at Section G herein.

CLAUSES INCORPORATED BY REFERENCE

52.246-8	Inspection Of Research And Development Cost Reimbursement	MAY 2001
252.246-7000	Material Inspection And Receiving Report	MAR 2003

Section F - Deliveries or Performance

CLAUSES INCORPORATED BY REFERENCE

52.247-34

F.O.B. Destination

NOV 1991

CLAUSES INCORPORATED BY FULL TEXT

F-1 Term of Contract

(a) The term of the contract commences on 2 December 2005 and continues through 31 August 2006.

(end of clause)

F-2 Reports and Other Deliverables

(a) Delivery of all reports and other deliverables shall be made to the addressee specified in F-3 entitled "Report Distribution" in accordance with the following:

Item No.	Description	Due Date (on or before)
0001	Interim Reports	See Exhibit A CDRL
0001	Final Report	31 August 2006
0001	Additional Misc. Deliverables	See Section C-2

(end of clause)

F-3 Report Distribution

1. For the Final Technical Report - The Contractor shall access the DARPA Extranet Reporting Page - <http://www.tfims.darpa.mil> and electronically submit all required reporting information as specified in Section C-2.

Additional distribution shall be made as follows:

(a) DARPA/Library
3701 North Fairfax Drive
Arlington, VA 22203-1714
Email: library@darpa.mil
(one copy of the Final Technical Report)

(b) Defense Technical Information Center

(1) Email: TR@dtic.mil
(one electronic copy of the Final Technical Report, if unclassified)

(2) Attn: DTIC-BCS
8725 John J. Kingman Road, Suite 0944
Fort Belvoir, VA 22060-0944
(two hard copies of the Final Technical Report if unclassified)

2. For Additional Misc. Deliverable - If applicable, any documentation associated with these deliverables shall be distributed to the following individuals:

(a) DARPA/CMO

Attn: Mr. Michael D. Blackstone
3701 North Fairfax Drive
Arlington, VA 22203-1714
Email: Michael.Blackstone@darpa.mil

(b) DARPA/IXO

Attn: Dr. Michael Pagels
3701 North Fairfax Drive
Arlington, VA 22203-1714
Email: Michael.Pagels@darpa.mil

(c) COR

Attn: Mr. William Koenig
AFRL/IFSC
2241 Avionics Circle
WPAFB, OH 45433
Email: william.koenig@wpafb.af.mil

3. All papers and articles published as a result of DARPA sponsored research shall include a statement reflecting the sponsorship. In addition, a bibliography of the titles and authors of all such papers are to be included in the Final Technical Report.

(a) The cover or title page of each of the above reports or publications prepared, will have the following citation:

Sponsored by
Defense Advanced Research Projects Agency
Information Exploitation Agency
ARPA Order No. V562
Issued by DARPA/CMO under Contract No. HR0011-06-C-0034

(b) The title page shall include a disclaimer worded substantially as follows:

"The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the official policies, either expressly or implied, of the Defense Advanced Research Projects Agency or the U.S. Government."

(end of clause)

F-4 Notice Regarding Late Delivery

(a) In the event the Contractor anticipates difficulty in complying with the contract delivery schedule, the Contractor shall immediately notify the Contracting Officer in writing, giving pertinent details, including the date by which it expects to make delivery; PROVIDED, however, that this date shall be informational only in character and the receipt thereof shall not be construed as a waiver by the Government of any contract delivery schedule, or any rights or remedies provided by law or under this contract.

(end of clause)

Section G - Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

AA: 9750400 1320 V562 P5G10 2525 DPAC 5 5535 S12136 62702E

AMOUNT: \$404,573.00

CIN 000000000000000000000000000000: \$404,573.00

CLAUSES INCORPORATED BY FULL TEXT

G-1 Procuring Office Representative

- (b) The Procuring Office Representative is Michael D. Blackstone, DARPA/CMO, 3701 North Fairfax Drive, Arlington, VA 22203-1714, telephone: 571-218-4804, e-mail: Michael.Blackstone@darpa.mil.

(end of clause)

G-2 Invoices

- (a) An original invoice identified by contract number, with supporting statements, shall be submitted for review and provisional approval to the cognizant audit agency listed below:

DCAA Great Lakes Branch Office
DoDAAC: HAA231
38701 Seven Mile Road
Suite 460
Livonia, MI 48152
Telephone: 734-805-3080
Email: dcaa-fao2261@dcaa.mil

Or as directed by DCAA and/or WAWF

- (b) Additionally, one information copy of each invoice shall be uploaded to TFIMS. This copy is for information purposes only. This is not required if invoicing is processed through Wide Area Work Flow (WAWF); however, a copy of all WAWF invoice submissions shall be forwarded to the COR for information purposes.

(end of clause)

G-3 Delegation of Authority for Contract Administration

- (a) DCMA Detroit is hereby designated as the Contracting Officer's authorized representative for administering this contract in accordance with current directives.

(end of clause)

G-4 Contracting Officer's Representative (COR)

(a) Performance of work under this contract shall be subject to the technical direction of Mr. William Koenig, AFRL/IFSC, 2241 Avionics Circle, WPAFB, OH 45433, 937-255-4709 (ext. 3172), Email: william.koenig@wpafb.af.mil. Such technical direction includes those instructions to the Contractor necessary to accomplish the Statement of Work. The COR is not otherwise authorized to make any representations or commitments of any kind on behalf of the Contracting Officer or the Government. The COR does not have the authority to alter the Contractor's obligations or to change the specifications of the contract.

(b) Technical direction shall not include any direction which:

- (1) Constitutes additional work outside the scope of work;
- (2) Constitutes a change as defined in Section I contract clause entitled "Changes";
- (3) In any manner causes an increase or decrease in the total estimated cost or the time required for contract performance; or
- (4) Changes any of the stated terms, conditions, or specifications of the contract.

(end of clause)

G-5 Payment of Cost and Fee

(a) As consideration for the proper performance of work required under this contract, the Contractor shall be paid as follows:

(1) Costs, as provided for under Section I contract clause titled "Allowable Cost and Payment" not to exceed the amount set forth as "Total Estimated Cost" in Section B, and subject further to those Section I clauses entitled "Limitation of Cost" or "Limitation of Funds".

(2) A fixed fee in the amount set forth as "Fixed Fee" in Section B, in accordance with the Section I contract clause entitled "Fixed Fee". The Contractor may bill on each invoice the amount of the fixed fee bearing the same percentage to the total fixed fee as the amount of cost billed bears to the total estimated cost.

(end of clause)

Section H - Special Contract Requirements

CLAUSES INCORPORATED BY FULL TEXT

H-1 Contracting Officer

(a) Notwithstanding any other provision of this contract, the Contracting Officer is the only individual authorized to redirect the effort or in any way amend or modify any of the terms of this contract. If, as a result of technical discussions, it is desirable to alter contract obligations or statement of work, a modification must be issued in writing and signed by the Contracting Officer.

(end of clause)

H-2 Type of Contract

(a) This is a Cost-Plus-Fixed-Fee completion contract.

(end of clause)

H-3 Public Release or Dissemination of Information

(a) There shall be no dissemination or publication, except within and between the Contractor and any subcontractors, of information developed under this contract or contained in the reports to be furnished pursuant to this contract without prior written approval of the COR. All technical reports will be given proper review by appropriate authority to determine which Distribution Statement is to be applied prior to the initial distribution of these reports by the Contractor. Papers resulting from unclassified contracted fundamental research are exempt from prepublication controls and this review requirement, pursuant to DoD Instruction 5230.27 dated October 6, 1987.

(b) When submitting material for clearance for open publication, the Contractor must furnish DARPA Technical Information Officer, 3701 North Fairfax Drive, Arlington VA 22203-1714, telephone (703) 526-4163 with five copies and allow four weeks for processing. Viewgraph presentations must be accompanied with a written text. Whenever a paper is to be presented at a meeting, the Contractor must indicate the exact dates of the meeting or the Contractor's date deadline for submitting the material.

(c) Information and instructions on Public Release or Dissemination can be found at <http://www.darpa.mil/tio/>.

(end of clause)

H-4 Key Personnel

(a) The Contractor shall notify the Contracting Officer prior to making any change in key personnel. Key personnel are defined as follows:

(b)(4)

(b) The Contractor must demonstrate that the qualifications of the prospective personnel are equal to or better than the qualifications of the personnel being replaced. Notwithstanding any of the foregoing provisions, key personnel shall be furnished unless the Contractor has demonstrated to the satisfaction of the COR that the qualifications of the proposed substitute personnel are equal to or better than the qualifications of the personnel being replaced.

(end of clause)

H-5 Restrictions on Printing

(a) Unless otherwise authorized in writing by the Contracting Officer, reports, data, or other written material produced using funds provided by this contract and submitted hereunder shall be reproduced only by duplicating processes and shall not exceed 5,000 single page reports or a total of 25,000 pages of a multiple-page report. These restrictions do not preclude the writing, editing, preparation of manuscript or reproducible copy of related illustrative materials if required as part of this contract, or incidental printing such as forms or materials necessary to be used by the Contractor to respond to the terms of the contract.

(end of clause)

H-6 Contractor Representations and Certifications

(a) The Contractor's Representations and Certifications dated 18 November 2005 are incorporated herein by reference.

(end of clause)

H-7 Insurance Schedule

(a) The Contractor shall maintain the types of insurance listed in FAR 28.307-2 (a), (b) and (c), with the minimum amounts of liability indicated therein. The types of insurance coverage listed in paragraphs (d) and (e) shall also be maintained when applicable.

(end of clause)

H-8 Travel

(a) Reimbursement for travel-related expenses shall be in accordance with the Contractor's approved travel policy. The Federal Travel Regulations, Joint Travel Regulations (JTR), and Standardized Regulations as stated in FAR 31.205-46 will be used as a guide in determining reasonableness of per diem costs. Costs for travel shall be allowable subject to the provisions of FAR 31.205-46.

(b) In connection with direct charge to the contract of travel-related expenses, the Contractor shall hold travel to the minimum required to meet the objectives of the contract, and substantial deviations from the amount of travel agreed to during contract negotiation shall not be made without the authorization of the Contracting Officer.

When applicable, the Contractor shall notify the COR of proposed travel of an employee beyond that agreed to during negotiations.

(c) Approval of the Contracting Officer shall be obtained in advance for attendance by personnel at training courses, seminars, and other meetings not directly related to contract performance if the costs for the courses, seminars, and other meetings are charged to the contract.

(d) All foreign travel shall be authorized and approved in advance, in writing, by the Contracting Officer. Request for such travel must be submitted to the Contracting Officer at least forty-five (45) days in advance of traveler's anticipated departure date, and shall include traveler's itinerary of United States Flag Air Carriers.

(end of clause)

H-9 Metric System

- (a) The Defense Advanced Research Projects Agency (DARPA) will consider the use of the metric system in all of its activities consistent with operational, economical, technical and safety requirements.
 - (b) The metric system will be considered for use in all new designs. When it is deemed not to be in the best interest of the DoD to provide metric design, justification shall be provided.
 - (c) Physical and operational interfaces between metric items and U.S. customary items will be designed to assure that interchangeability and interoperability will not be affected.
 - (d) Existing designs dimensioned in U.S. customary units will be converted to metric units only if determined to be necessary or advantageous. Unnecessary retrofit of existing systems with new metric components will be avoided where both the new metric and existing units are interchangeable and interoperable. Normally, the system of measurement in which an item is originally designed will be retained for the life of the item.
 - (e) During the metric transition phase hybrid metric and U.S. customary designs will be necessary and acceptable. Material components, parts, subassemblies, and semi-fabricated material, which are of adequate or when it is otherwise specifically determined to be in the best interest of the Department of Defense. Bulk materials will be specified and accepted in metric units when it is expedient or economical to do so.
 - (f) Technical reports, studies, and position papers, (except those pertaining to items dimensioned in U.S. customary units) will include metric units of measurement in addition to or in lieu of U.S. customary units. With respect to existing contracts, this requirement applies only if such documentation can be obtained without an increase in contract costs.
 - (g) Use of the dual dimensions (i.e., both metric and U.S. customary dimensions) on drawings will be avoided unless it is determined in specific instances that such usage will be beneficial. However, the use of tables on the document to translate dimensions from one system of measurement to the other is acceptable.
- (end of clause)

H-10 Consent to Subcontract

- (a) Pursuant to the clause of the General Provisions entitled "Subcontracts (AUG 1998)," FAR 52.244-2, the Contracting Officer hereby consents to the placement of subcontract(s) with the following firm(s)/consultant(s) at the ceiling amounts specified:

NAME

TOTAL AMOUNT

NO SUBCONTRACTORS HAVE BEEN AUTHORIZED AT TIME OF AWARD.

- (b) Approval must be obtained from the Administrative Contracting Officer to increase the use or number of subcontractors from the level established in subparagraph (a).
- (end of clause)

H-11 Consultants

- (a) The contractor is authorized to use the following consultants to the extent indicated:

<u>Name</u>	<u>No. of Hours</u>	<u>Rate</u>	<u>Total Amount</u>
-------------	---------------------	-------------	---------------------

NO CONSULTANTS HAVE BEEN AUTHORIZED AT TIME OF AWARD.

- (b) Approval must be obtained from the Administrative Contracting Officer to increase the use of consultants from the level estimated in subparagraph (a).

(end of clause)

H-12 Proprietary Technical Data and Computer Software

- (a) Any deliverable technical data or computer software developed or generated at private expense and considered to be proprietary by the Contractor or subcontractors shall be delivered in accordance with DFARS 252.227-7013 and 252.227-7014. A list of such data and/or software is incorporated into the contract as Attachment No. N/A - None Identified at Time of Award.

(end of clause)

H-13 Contractor Acquired Property (IT)

- (a) Performance of this contract will require use of the information technology (IT) resources listed below, acquisition of which (or equivalent) is hereby authorized:

ITEM	QTY	TOTAL AMOUNT
Altus 1300 Server	1	\$ 7,426.00
NexSan 5TB Raid	1	\$17,520.00
NetShelter Enclosure	1	\$ 940.00
APC Smart-UPS Rack Mount	1	\$ 1,300.00
Total		\$27,186.00

- (b) The costs incurred by the Contractor in acquiring the IT listed in paragraph (1.) above shall be considered allowable costs under the contract provided that the total net amount of the IT does not exceed \$27,186.00. The Contractor shall have no obligation to acquire IT and the Government shall have no obligation to reimburse any amount for IT in excess of the amount set forth above unless the contract is modified to increase this amount.

- (c) The IT resources listed above shall be considered Government Property and shall be subject to the provisions of FAR 52.245-5, incorporated in Section I.

- (d) The Contractor shall not use Contractor acquired property listed above for work other than that performed pursuant to this contract unless so authorized in writing by the Contracting Officer.

- (e) This authorization is subject to the Contractor's compliance with the approvals and screening requirements set forth in DFARS Subpart 239.73 and DoD 7950.1-M, "Defense Automation Resources Management Manual."

(end of clause)

Section I - Contract Clauses

CLAUSES INCORPORATED BY REFERENCE

52.202-1	Definitions	JUL 2004
52.203-3	Gratuities	APR 1984
52.203-5	Covenant Against Contingent Fees	APR 1984
52.203-6	Restrictions On Subcontractor Sales To The Government	JUL 1995
52.203-7	Anti-Kickback Procedures	JUL 1995
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity	JAN 1997
52.203-10	Price Or Fee Adjustment For Illegal Or Improper Activity	JAN 1997
52.203-12	Limitation On Payments To Influence Certain Federal Transactions	JUN 2003
52.204-4	Printed or Copied Double-Sided on Recycled Paper	AUG 2000
52.209-6	Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Proposed for Debarment	JAN 2005
52.215-15	Pension Adjustments and Asset Reversions	OCT 2004
52.215-18	Reversion or Adjustment of Plans for Postretirement Benefits (PRB) Other than Pensions	JUL 2005
52.215-19	Notification of Ownership Changes	OCT 1997
52.216-7	Allowable Cost And Payment	DEC 2002
52.216-8	Fixed Fee	MAR 1997
52.219-8	Utilization of Small Business Concerns	MAY 2004
52.222-3	Convict Labor	JUN 2003
52.222-21	Prohibition Of Segregated Facilities	FEB 1999
52.222-26	Equal Opportunity	APR 2002
52.222-35	Equal Opportunity For Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans	DEC 2001
52.222-36	Affirmative Action For Workers With Disabilities	JUN 1998
52.222-37	Employment Reports On Special Disabled Veterans, Veterans Of The Vietnam Era, and Other Eligible Veterans	DEC 2001
52.222-39	Notification of Employee Rights Concerning Payment of Union Dues or Fees	DEC 2004
52.223-14	Toxic Chemical Release Reporting	AUG 2003
52.226-1	Utilization Of Indian Organizations And Indian-Owned Economic Enterprises	JUN 2000
52.227-2	Notice And Assistance Regarding Patent And Copyright Infringement	AUG 1996
52.228-7	Insurance--Liability To Third Persons	MAR 1996
52.232-9	Limitation On Withholding Of Payments	APR 1984
52.232-20	Limitation Of Cost	APR 1984
52.232-23 Alt I	Assignment of Claims (Jan 1986) - Alternate I	APR 1984
52.232-25	Prompt Payment	OCT 2003
52.232-33	Payment by Electronic Funds Transfer--Central Contractor Registration	OCT 2003
52.233-1	Disputes	JUL 2002
52.233-3 Alt I	Protest After Award (Aug 1996) - Alternate I	JUN 1985
52.242-1	Notice of Intent to Disallow Costs	APR 1984
52.242-4	Certification of Final Indirect Costs	JAN 1997
52.242-13	Bankruptcy	JUL 1995
52.243-2 Alt V	Changes--Cost-Reimbursement (Aug 1987) - Alternate V	APR 1984

52.243-5	Changes and Changed Conditions	APR 1984
52.244-2 Alt I	Subcontracts (Aug 1998) - Alternate I	MAR 2005
52.244-6	Subcontracts for Commercial Items	DEC 2004
52.245-5 Dev	Government Property (Cost-Reimbursement, Time-and-Material, or Labor-Hour Contracts) Deviation	MAY 2004
52.246-1	Contractor Inspection Requirements	APR 1984
52.249-6	Termination (Cost Reimbursement)	MAY 2004
52.249-14	Excusable Delays	APR 1984
52.253-1	Computer Generated Forms	JAN 1991
252.201-7000	Contracting Officer's Representative	DEC 1991
252.203-7001	Prohibition On Persons Convicted of Fraud or Other Defense-Contract-Related Felonies	DEC 2004
252.204-7003	Control Of Government Personnel Work Product	APR 1992
252.204-7004 Alt A	Central Contractor Registration (52.204-7) Alternate A	NOV 2003
252.209-7004	Subcontracting With Firms That Are Owned or Controlled By The Government of a Terrorist Country	MAR 1998
252.219-7011	Notification to Delay Performance	JUN 1998
252.225-7012	Preference For Certain Domestic Commodities	JUN 2004
252.225-7016	Restriction On Acquisition Of Ball and Roller Bearings	JUN 2005
252.227-7014	Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation	JUN 1995
252.227-7015	Technical Data--Commercial Items	NOV 1995
252.227-7016	Rights in Bid or Proposal Information	JUN 1995
252.227-7019	Validation of Asserted Restrictions--Computer Software	JUN 1995
252.227-7027	Deferred Ordering Of Technical Data Or Computer Software	APR 1988
252.227-7037	Validation of Restrictive Markings on Technical Data	SEP 1999
252.232-7003	Electronic Submission of Payment Requests	JAN 2004
252.235-7010	Acknowledgment of Support and Disclaimer	MAY 1995
252.235-7011	Final Scientific or Technical Report	NOV 2004
252.242-7004	Material Management And Accounting System	DEC 2000
252.243-7002	Requests for Equitable Adjustment	MAR 1998
252.244-7000	Subcontracts for Commercial Items and Commercial Components (DoD Contracts)	MAR 2000
252.247-7023	Transportation of Supplies by Sea	MAY 2002
252.247-7024	Notification Of Transportation Of Supplies By Sea	MAR 2000

CLAUSES INCORPORATED BY FULL TEXT

52.222-2 PAYMENT FOR OVERTIME PREMIUMS (JUL 1990)

(a) The use of overtime is authorized under this contract if the overtime premium cost does not exceed \$0.00 or the overtime premium is paid for work --

(1) Necessary to cope with emergencies such as those resulting from accidents, natural disasters, breakdowns of production equipment, or occasional production bottlenecks of a sporadic nature;

(2) By indirect-labor employees such as those performing duties in connection with administration, protection, transportation, maintenance, standby plant protection, operation of utilities, or accounting;

(3) To perform tests, industrial processes, laboratory procedures, loading or unloading of transportation conveyances, and operations in flight or afloat that are continuous in nature and cannot reasonably be interrupted or completed otherwise; or

(4) That will result in lower overall costs to the Government.

(b) Any request for estimated overtime premiums that exceeds the amount specified above shall include all estimated overtime for contract completion and shall--

(1) Identify the work unit; e.g., department or section in which the requested overtime will be used, together with present workload, staffing, and other data of the affected unit sufficient to permit the Contracting Officer to evaluate the necessity for the overtime;

(2) Demonstrate the effect that denial of the request will have on the contract delivery or performance schedule;

(3) Identify the extent to which approval of overtime would affect the performance or payments in connection with other Government contracts, together with identification of each affected contract; and

(4) Provide reasons why the required work cannot be performed by using multishift operations or by employing additional personnel.

* Insert either "zero" or the dollar amount agreed to during negotiations. The inserted figure does not apply to the exceptions in paragraph (a)(1) through (a)(4) of the clause.

(End of clause)

52.227-12 PATENT RIGHTS--RETENTION BY THE CONTRACTOR (LONG FORM) (JAN 1997)

(a) Definitions. "Invention" means any invention or discovery which is or may be patentable or otherwise protectable under title 35 of the United States Code or any novel variety of plant that is or may be protectable under the Plant Variety Protection Act (7 U.S.C. 2321, et seq.).

"Made" when used in relation to any invention means the conception or first actual reduction to practice of such invention.

"Nonprofit organization" means a domestic university or other institution of higher education or an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c)) and exempt from taxation under section 501(a) of the Internal Revenue Code (26 U.S.C. 501(a)) or any nonprofit scientific or educational organization qualified under a state nonprofit organization statute.

"Practical application" means to manufacture in the case of a composition or product, to practice in the case of a process or method, or to operate in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are, to the extent permitted by law or Government regulations, available to the public on reasonable terms.

"Small business firm" means a small business concern as defined at section 2 of Pub. L. 85-536 (15 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of this clause, the size standards for small business concerns involved in Government procurement and subcontracting at 13 CFR 121.3-8 and 13 CFR 121.3-12, respectively, will be used.

"Subject invention" means any invention of the Contractor conceived or first actually reduced to practice in the performance of work under this contract; provided, that in the case of a variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act, 7 U.S.C. 2401(d)) must also occur during the period of contract performance.

(b) Allocation of principal rights. The Contractor may elect to retain the entire right, title, and interest throughout the world to each subject invention subject to the provisions of this clause and 35 U.S.C. 203. With respect to any subject invention in which the Contractor elects to retain title, the Federal Government shall have a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject invention throughout the world.

(c) Invention disclosure, election of title, and filing of patent applications by Contractor. (1) The Contractor shall disclose each subject invention to the Contracting Officer within 2 months after the inventor discloses it in writing to Contractor personnel responsible for patent matters or within 6 months after the Contractor becomes aware that a subject invention has been made, whichever is earlier. The disclosure to the Contracting Officer shall be in the form of a written report and shall identify the contract under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding, to the extent known at the time of the disclosure, of the nature, purpose, operation, and physical, chemical, biological, or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale, or public use of the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to the Contracting Officer, the Contractor shall promptly notify the Contracting Officer of the acceptance of any manuscript describing the invention for publication or of any on sale or public use planned by the Contractor.

(2) The Contractor shall elect in writing whether or not to retain title to any such invention by notifying the Federal agency at the time of disclosure or within 8 months of disclosure, as to those countries (including the United States) in which the Contractor will retain title; provided, that in any case where publication, on sale, or public use has initiated the 1-year statutory period wherein valid patent protection can still be obtained in the United States, the period of election of title may be shortened by the agency to a date that is no more than 60 days prior to the end of the statutory period.

(3) The Contractor shall file its initial patent application on an elected invention within 1 year after election or, if earlier, prior to the end of any statutory period wherein valid patent protection can be obtained in the United States after a publication, on sale, or public use. The Contractor shall file patent applications in additional countries (including the European Patent Office and under the Patent Cooperation Treaty) within either 10 months of the corresponding initial patent application or 6 months from the date permission is granted by the Commissioner of Patents and Trademarks to file foreign patent applications where such filing has been prohibited by a Secrecy Order.

(4) Requests for extension of the time for disclosure to the Contracting Officer, election, and filing may, at the discretion of the funding Federal agency, be granted, and will normally be granted unless the Contracting Officer has reason to believe that a particular extension would prejudice the Government's interest.

(d) Conditions when the Government may obtain title. The Contractor shall convey to the Federal agency, upon written request, title to any subject invention--

(1) If the Contractor elects not to retain title to a subject invention;

(2) If the Contractor fails to disclose or elect the subject invention within the times specified in paragraph (c) above (the agency may only request title within 60 days after learning of the Contractor's failure to report or elect within the specified times);

(3) In those countries in which the Contractor fails to file patent applications within the time specified in paragraph (c) above; provided, however, that if the Contractor has filed a patent application in a country after the times specified in paragraph (c) above, but prior to its receipt of the written request of the Federal agency, the Contractor shall continue to retain title in that country; or

(4) In any country in which the Contractor decides not to continue the prosecution of any application for, to pay the maintenance fees on, or defend in reexamination or opposition proceeding on, a patent on a subject invention.

(e) Minimum rights to Contractor. (1) The Contractor shall retain a nonexclusive, royalty-free license throughout the world in each subject invention to which the Government obtains title except if the Contractor fails to disclose the subject invention within the times specified in paragraph (c) above. The Contractor's license extends to its domestic subsidiaries and affiliates, if any, within the corporate structure of which the Contractor is a part and includes the right to grant sublicenses of the same scope to the extent the Contractor was legally obligated to do so at the time the contract was awarded. The license is transferable only with the approval of the funding Federal agency except when transferred to the successor of that part of the Contractor's business to which the invention pertains.

(2) The Contractor's domestic license may be revoked or modified by the funding Federal agency to the extent necessary to achieve expeditious practical application of the subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions in the Federal Property Management Regulations and agency licensing regulations (if any). This license shall not be revoked in that field of use or the geographical areas in which the Contractor has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at the discretion of the funding Federal agency to the extent the Contractor, its licensees, or its domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.

(3) Before revocation or modification of the license, the funding Federal agency shall furnish the Contractor a written notice of its intention to revoke or modify the license, and the Contractor shall be allowed 30 days (or such other time as may be authorized by the funding Federal agency for good cause shown by the Contractor) after the notice to show cause why the license should not be revoked or modified. The Contractor has the right to appeal, in accordance with applicable agency licensing regulations and 37 CFR 404 concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of its license.

(f) Contractor action to protect the Government's interest. (1) The Contractor agrees to execute or to have executed and promptly deliver to the Federal agency all instruments necessary to (i) establish or confirm the rights the Government has throughout the world in those subject inventions to which the Contractor elects to retain title, and (ii) convey title to the Federal agency when requested under paragraph (d) above and subparagraph (n)(2) below, and to enable the Government to obtain patent protection throughout the world in that subject invention.

(2) The Contractor agrees to require, by written agreement, its employees, other than clerical and nontechnical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the Contractor each subject invention made under contract in order that the Contractor can comply with the disclosure provisions of paragraph (c) above, and to execute all papers necessary to file patent applications on subject inventions and to establish the Government's rights in the subject inventions. This disclosure format should require, as a minimum, the information required by subparagraph (c)(1) above. The Contractor shall instruct such employees through employee agreements or other suitable educational programs on the importance of reporting inventions in sufficient time to permit the filing of patent applications prior to U.S. or foreign statutory bars.

(3) The Contractor shall notify the Federal agency of any decision not to continue the prosecution of a patent application, pay maintenance fees, or defend in a reexamination or opposition proceeding on a patent, in any country, not less than 30 days before the expiration of the response period required by the relevant patent office.

(4) The Contractor agrees to include, within the specification of any United States patent application and any patent issuing thereon covering a subject invention, the following statement: "This invention was made with Government support under (identify the contract) awarded by (identify the Federal agency). The Government has certain rights in this invention."

(5) The Contractor shall establish and maintain active and effective procedures to assure that subject inventions are promptly identified and disclosed to Contractor personnel responsible for patent matters within 6 months of conception and/or first actual reduction to practice, whichever occurs first in performance of work under this contract. These procedures shall include the maintenance of laboratory notebooks or equivalent records and other records as are reasonably necessary to document the conception and/or the first actual reduction to practice of

subject inventions, and records that show that the procedures for identifying and disclosing the inventions are followed. Upon request, the Contractor shall furnish the Contracting Officer a description of such procedures for evaluation and for determination as to their effectiveness.

(6) The Contractor agrees, when licensing a subject invention, to arrange to avoid royalty charges on acquisitions involving Government funds, including funds derived through Military Assistance Program of the Government or otherwise derived through the Government, to refund any amounts received as royalty charges on the subject invention in acquisitions for, or on behalf of, the Government, and to provide for such refund in any instrument transferring rights in the invention to any party.

(7) The Contractor shall furnish the Contracting Officer the following:

(i) Interim reports every 12 months (or such longer period as may be specified by the Contracting Officer) from the date of the contract, listing subject inventions during that period and stating that all subject inventions have been disclosed or that there are no such inventions.

(ii) A final report, within 3 months after completion of the contracted work, listing all subject inventions or stating that there were no such inventions, and listing all subcontracts at any tier containing a patent rights clause or stating that there were no such subcontracts.

(8) The Contractor shall promptly notify the Contracting Officer in writing upon the award of any subcontract at any tier containing a patent rights clause by identifying the subcontractor, the applicable patent rights clause, the work to be performed under the subcontract, and the dates of award and estimated completion. Upon request of the Contracting Officer, the Contractor shall furnish a copy of such subcontract, and no more frequently than annually, a listing of the subcontracts that have been awarded.

(9) In the event of a refusal by a prospective subcontractor to accept one of the clauses in subparagraph (g)(1) or (2) below, the Contractor (i) shall promptly submit a written notice to the Contracting Officer setting forth the subcontractor's reasons for such refusal and other pertinent information that may expedite disposition of the matter and (ii) shall not proceed with such subcontracting without the written authorization of the Contracting Officer.

(10) The Contractor shall provide, upon request, the filing date, serial number and title, a copy of the patent application (including an English-language version if filed in a language other than English), and patent number and issue date for any subject invention for which the Contractor has retained title.

(11) Upon request, the Contractor shall furnish the Government an irrevocable power to inspect and make copies of the patent application file.

(g) Subcontracts. (1) The Contractor shall include the clause at 52.227-11 of the Federal Acquisition Regulation (FAR), suitably modified to identify the parties, in all subcontracts, regardless of tier, for experimental, developmental, or research work to be performed by a small business firm or nonprofit organization. The subcontractor shall retain all rights provided for the Contractor in this clause, and the Contractor shall not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractor's subject inventions.

(2) The Contractor shall include this clause (FAR 52.227-12) in all other subcontracts, regardless of tier, for experimental, developmental, or research work.

(3) In the case of subcontracts, at any tier, when the prime award with the Federal agency was a contract (but not a grant or cooperative agreement), the agency, subcontractor, and the Contractor agree that the mutual obligations of the parties created by this clause constitute a contract between the subcontractor and the Federal agency with respect to those matters covered by this clause.

(h) Reporting utilization of subject inventions. The Contractor agrees to submit on request periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are

being made by the Contractor or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Contractor, and such other data and information as the agency may reasonably specify. The Contractor also agrees to provide additional reports as may be requested by the agency in connection with any march-in proceedings undertaken by the agency in accordance with paragraph (j) of this clause. To the extent data or information supplied under this paragraph is considered by the Contractor, its licensee or assignee to be privileged and confidential and is so marked, the agency agrees that, to the extent permitted by law, it shall not disclose such information to persons outside the Government.

(i) Preference for United States industry. Notwithstanding any other provision of this clause, the Contractor agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell any subject invention in the United States unless such person agrees that any products embodying the subject invention will be manufactured substantially in the United States. However, in individual cases, the requirement for such an agreement may be waived by the Federal agency upon a showing by the Contractor or its assignee that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.

(j) March-in rights. The Contractor agrees that with respect to any subject invention in which it has acquired title, the Federal agency has the right in accordance with the procedures in FAR 27.304-1(g) to require the Contractor, an assignee, or exclusive licensee of a subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and if the Contractor, assignee, or exclusive licensee refuses such a request, the Federal agency has the right to grant such a license itself if the Federal agency determines that--

(1) Such action is necessary because the Contractor or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use;

(2) Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the Contractor, assignee, or their licensees;

(3) Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the Contractor, assignee, or licensees; or

(4) Such action is necessary because the agreement required by paragraph (i) of this clause has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the United States is in breach of such agreement.

(k) Special provisions for contracts with nonprofit organizations. [Reserved]

(l) Communications. Shall be made in writing to the Procuring Contracting Officer (PCO) identified at Section H of the Contract. Copies of such communications shall be provided to the Administrative Contracting Officer (ACO) identified at Section H of the Contract and uploaded to "file storage" in TFIMS.

(m) Other inventions. Nothing contained in this clause shall be deemed to grant to the Government any rights with respect to any invention other than a subject invention.

(n) Examination of records relating to inventions. (1) The Contracting Officer or any authorized representative shall, until 3 years after final payment under this contract, have the right to examine any books (including laboratory notebooks), records, and documents of the Contractor relating to the conception or first reduction to practice of inventions in the same field of technology as the work under this contract to determine whether--

(i) Any such inventions are subject inventions;

(ii) The Contractor has established and maintains the procedures required by subparagraphs (f)(2) and (f)(3) of this clause; and

(iii) The Contractor and its inventors have complied with the procedures.

(2) If the Contracting Officer determines that an inventor has not disclosed a subject invention to the Contractor in accordance with the procedures required by subparagraph (f)(5) of this clause, the Contracting Officer may, within 60 days after the determination, request title in accordance with subparagraphs (d)(2) and (d)(3) of this clause. However, if the Contractor establishes that the failure to disclose did not result from the Contractor's fault or negligence, the Contracting Officer shall not request title.

(3) If the Contracting Officer learns of an unreported Contractor invention which the Contracting Officer believes may be a subject invention, the Contractor may be required to disclose the invention to the agency for a determination of ownership rights.

(4) Any examination of records under this paragraph shall be subject to appropriate conditions to protect the confidentiality of the information involved.

(o) Withholding of payment (this paragraph does not apply to subcontracts). (1) Any time before final payment under this contract, the Contracting Officer may, in the Government's interest, withhold payment until a reserve not exceeding \$50,000 or 5 percent of the amount of the contract, whichever is less, shall have been set aside if, in the Contracting Officer's opinion, the Contractor fails to--

(i) Establish, maintain, and follow effective procedures for identifying and disclosing subject inventions pursuant to subparagraph (f)(5) above;

(ii) Disclose any subject invention pursuant to subparagraph (c)(1) above;

(iii) Deliver acceptable interim reports pursuant to subdivision (f)(7)(i) above; or

(iv) Provide the information regarding subcontracts pursuant to subparagraph (f)(8) of this clause.

(2) Such reserve or balance shall be withheld until the Contracting Officer has determined that the Contractor has rectified whatever deficiencies exist and has delivered all reports, disclosures, and other information required by this clause.

(3) Final payment under this contract shall not be made before the Contractor delivers to the Contracting Officer all disclosures of subject inventions required by subparagraph (c)(1) above, an acceptable final report pursuant to subdivision (f)(7)(ii) above, and all past due confirmatory instruments.

(4) The Contracting Officer may decrease or increase the sums withheld up to the maximum authorized above. No amount shall be withheld under this paragraph while the amount specified by this paragraph is being withheld under other provisions of the contract. The withholding of any amount or the subsequent payment thereof shall not be construed as a waiver of any Government right.

(End of clause)

52.233-4 APPLICABLE LAW FOR BREACH OF CONTRACT CLAIM (OCT 2004)

United States law will apply to resolve any claim of breach of this contract.

(End of clause)

52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

www. <http://farsite.hill.af.mil>
(End of clause)

52.252-6 AUTHORIZED DEVIATIONS IN CLAUSES (APR 1984)

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.

(b) The use in this solicitation or contract of any Defense Federal Acquisition Regulation Supplement (48 CFR Chapter 2) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

(End of clause)

252.247-7023 TRANSPORTATION OF SUPPLIES BY SEA (MAY 2002) ALTERNATE III (MAY 2002)

(a) Definitions. As used in this clause --

(1) "Components" means articles, materials, and supplies incorporated directly into end products at any level of manufacture, fabrication, or assembly by the Contractor or any subcontractor.

(2) "Department of Defense" (DoD) means the Army, Navy, Air Force, Marine Corps, and defense agencies.

(3) "Foreign flag vessel" means any vessel that is not a U.S.-flag vessel.

(4) "Ocean transportation" means any transportation aboard a ship, vessel, boat, barge, or ferry through international waters.

(5) "Subcontractor" means a supplier, materialman, distributor, or vendor at any level below the prime contractor whose contractual obligation to perform results from, or is conditioned upon, award of the prime contract and who is performing any part of the work or other requirement of the prime contract.

(6) "Supplies" means all property, except land and interests in land, that is clearly identifiable for eventual use by or owned by the DoD at the time of transportation by sea.

(i) An item is clearly identifiable for eventual use by the DoD if, for example, the contract documentation contains a reference to a DoD contract number or a military destination.

(ii) "Supplies" includes (but is not limited to) public works; buildings and facilities; ships; floating equipment and vessels of every character, type, and description, with parts, subassemblies, accessories, and equipment; machine tools; material; equipment; stores of all kinds; end items; construction materials; and components of the foregoing.

(7) "U.S.-flag vessel" means a vessel of the United States or belonging to the United States, including any vessel registered or having national status under the laws of the United States.

(b)(1) The Contractor shall use U.S.-flag vessels when transporting any supplies by sea under this contract.

(2) A subcontractor transporting supplies by sea under this contract shall use U.S.-flag vessels if--

(i) This contract is a construction contract; or

(ii) The supplies being transported are--

(A) Noncommercial items; or

(B) Commercial items that--

(1) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it contracts for f.o.b. destination shipment);

(2) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(3) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

(c) The Contractor and its subcontractors may request that the Contracting Officer authorize shipment in foreign-flag vessels, or designate available U.S.-flag vessels, if the Contractor or a subcontractor believes that --

(1) U.S.-flag vessels are not available for timely shipment;

(2) The freight charges are inordinately excessive or unreasonable; or

(3) Freight charges are higher than charges to private persons for transportation of like goods.

(d) The Contractor must submit any request for use of other than U.S.-flag vessels in writing to the Contracting Officer at least 45 days prior to the sailing date necessary to meet its delivery schedules. The Contracting Officer will process requests submitted after such date(s) as expeditiously as possible, but the Contracting Officer's failure to grant approvals to meet the shipper's sailing date will not of itself constitute a compensable delay under this or any other clause of this contract. Requests shall contain at a minimum --

(1) Type, weight, and cube of cargo;

(2) Required shipping date;

(3) Special handling and discharge requirements;

(4) Loading and discharge points;

(5) Name of shipper and consignee;

(6) Prime contract number; and

(7) A documented description of efforts made to secure U.S.-flag vessels, including points of contact (with names and telephone numbers) with at least two U.S.-flag carriers contacted. Copies of telephone notes, telegraphic and facsimile message or letters will be sufficient for this purpose.

(e) The Contractor shall, within 30 days after each shipment covered by this clause, provide the Contracting Officer and the Maritime Administration, Office of Cargo Preference, U.S. Department of Transportation, 400 Seventh Street SW., Washington, DC 20590, one copy of the rated on board vessel operating carrier's ocean bill of lading, which shall contain the following information:

(1) Prime contract number;

(2) Name of vessel;

(3) Vessel flag of registry;

(4) Date of loading;

(5) Port of loading;

(6) Port of final discharge;

(7) Description of commodity;

(8) Gross weight in pounds and cubic feet if available;

(9) Total ocean freight in U.S. dollars; and

(10) Name of the steamship company.

(f) The Contractor shall insert the substance of this clause, including this paragraph (f), in subcontracts that are for a type of supplies described in paragraph (b)(2) of this clause.

(End of clause)

Section J - List of Documents, Exhibits and Other Attachments**Exhibit/Attachment Table of Contents**

DOCUMENT TYPE	DESCRIPTION	PAGES	DATE
Exhibit A	CLIN 0001 Exhibit(s)	8	N/A
Statement of Work	PURDEME	4	12 October 2005

CONTRACT NO. HR0011-06-C-0034

EXHIBIT A - CDRL A001

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY
0001	A	TDP TM- OTHER MISC

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
PURDEME - Seedling	HR0011-06-C-0034	General Dynamics - AIS

1. DATA ITEM NO. A001	2. TITLE OF DATA ITEM RESEARCH AND DEVELOPMENT (R&D) PROJECT SUMMARY	3. SUBTITLE T-FIMS QUARTERLY AND MONTHLY REPORTING
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4. AUTHORITY (Data Acquisition Document No.) DI-MISC-81612A	5. CONTRACT REFERENCE C-2	6. REQUIRING OFFICE IXO
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7. DD250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION	
SEE BLOCK 16		SEE BLOCK 16	SEE BLOCK 16		b. COPIES

8. APP CODE	B (See H-3)	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION	a. ADDRESSEE	Draft	Final	
N		0	N/A			Reg	Repro

16. REMARKS

REFERENCE BLOCK 2, RESEARCH AND DEVELOPMENT PROJECT SUMMARY, AND BLOCK 4, DI-MISC-81612A.

FORMAT.

- **GENERAL FORMAT INSTRUCTIONS: COMPLY WITH ALL INSTRUCTIONS DELINEATED ON THE DARPA T-FIMS WEB SITE (<http://www.tfims.darpa.mil>).**
- **SPECIAL INSTRUCTIONS. UPLOAD THE FOLLOWING ITEMS TO THE DARPA T-FIMS WEB SITE (<http://www.tfims.darpa.mil>).**
 - **PUBLICATIONS THIS PERIOD (3.1.7) IN ADOBE ACROBAT (PDF) FILE FORMAT.**
 - **UPDATED SCHEDULE AND MILESTONES (1.2.2.4) IN EITHER POWERPOINT (PPT), JPG, TIFF, OR PDF FILE FORMAT.**
 - **QUAD-CHART (1.2.2.7) IN MICROSOFT POWERPOINT (PPT) FILE FORMAT.**

ELECTRONIC SUBMISSION. THE CONTRACTOR SHALL ACCESS THE DARPA T-FIMS WEB SITE (<http://www.tfims.darpa.mil>) AND ELECTRONICALLY SUBMIT ALL REQUIRED REPORTING INFORMATION FOLLOWING THE SPECIFICATIONS OUTLINED BELOW.

POST-AWARD INITIAL SUBMISSION REQUIREMENT.

- **SUBMIT THE PERFORMING ORGANIZATION CONTACTS (1.1.2) WITHIN FIVE (5) CALENDAR DAYS AFTER CONTRACT AWARD TO T-FIMS HELP BY E-MAIL (Tfims-Help@darpa.mil) FOR AWARDEE USER ACCOUNT ACTIVATION.**

CONTINUED ON THE NEXT PAGE.

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
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CONTRACT DATA REQUIREMENTS LIST, DD FORM 1423 CONTINUATION SHEET

CLIN 0001

Exhibit A

HR0011-06-C-0034

PR No.

DATA ITEM No. A001

BLOCK 16, continued,

REPORTING TERMINOLOGY - QUARTERLY REPORTING PERIODS.

- JUL-SEP: COVERS PERFORMANCE FROM 1 JULY - 30 SEPTEMBER
- OCT-DEC: COVERS PERFORMANCE FROM 1 OCTOBER - 31 DECEMBER
- JAN-MAR: COVERS PERFORMANCE FROM 1 JANUARY - 31 MARCH
- APR-JUN: COVERS PERFORMANCE FROM 1 APRIL - 30 JUNE

QUARTERLY SUBMISSION REQUIREMENTS.

- FREQUENCY (BLOCK 10). INPUT FOUR (4) TIMES YEARLY, ONCE FOR EACH OF THE QUARTERLY REPORTING PERIODS CITED ABOVE, FOR THE DURATION OF THE CONTRACT.
- DATE OF FIRST SUBMISSION (BLOCK 12). SUBMIT WITHIN FIFTEEN (15) CALENDAR DAYS AFTER THE END OF MOST RECENT QUARTERLY REPORTING PERIOD
 - FOR REPORTING PERIOD JUL-SEP, DUE DATE IS OCTOBER 15
 - FOR REPORTING PERIOD OCT-DEC, DUE DATE IS JANUARY 15
 - FOR REPORTING PERIOD JAN-MAR, DUE DATE IS APRIL 15
 - FOR REPORTING PERIOD APR-JUN, DUE DATE IS JULY 15
- QUARTERLY CONTENT REQUIREMENTS.
 - MINIMAL INITIAL QUARTERLY SUBMISSION. IF THE AWARD OCCURS WITHIN THIRTY (30) CALENDAR DAYS PRIOR TO THE END OF THE QUARTERLY REPORTING PERIOD, SUBMIT PROJECT DESCRIPTION (1.2.2) ONLY.
 - FIRST QUARTERLY SUBMITTAL WILL CONTAIN RESPONSES TO ALL PROJECT INFORMATION (1), WITH THE EXCEPTION OF THE QUAD CHART (1.2.2.7); THE FUNDING REPORT (2), WITH THE EXCEPTION OF THE PROJECTED FUNDING INCREMENT (2.5); AND THE TECHNICAL REPORT (3).
 - FOR ALL OTHER QUARTERLY SUBMISSIONS, SUBMIT OR UPDATE THE ADMINISTRATIVE INFORMATION (1.1), INVOICES THIS PERIOD (2.2), PLANNED INCURRED EXPENSES (2.4), AND ALL THE INFORMATION UNDER THE TECHNICAL REPORT (3.)
 - IN ADDITION, SUBMIT THE FOLLOWING FOR THE APR-JUN QUARTERLY REPORTS.
 - QUAD CHART (1.2.2.7).
 - PROJECTED FUNDING INCREMENT (2.5).
 - IN ADDITION TO REPORTING THE PLANNED ACTIVITIES FOR THE NEXT MONTH (3.2.1.), INCLUDE A TOP-LEVEL BULLET LIST OF THE PLANNED ACTIVITIES FOR THE TIME PERIOD BEGINNING ON 1 AUGUST OF THE CURRENT YEAR AND ENDING ON 31 DECEMBER OF THE NEXT YEAR.

MONTHLY SUBMISSION REQUIREMENTS.

- FREQUENCY (BLOCK 10). INPUT TWELVE (12) TIMES YEARLY (MONTHLY) FOR THE DURATION OF THE CONTRACT.
- DATE OF FIRST SUBMISSION (BLOCK 12). SUBMIT WITHIN FIFTEEN (15) CALENDAR DAYS AFTER THE END OF THE FIRST CALENDAR MONTH BUT NO SOONER THAN THIRTY (30) DAYS AFTER AWARD.
- MONTHLY CONTENT REQUIREMENT.
 - FOR THE DURATION OF THE CONTRACT SUBMIT INCURRED EXPENSES THIS PERIOD (2.1) AS A LUMP SUM TOTAL ONLY.
 - FOR THE DURATION OF THE CONTRACT SUBMIT INVOICES THIS PERIOD (2.2) AS INVOICES ARE SUBMITTED TO DFAS FOR PAYMENT.

CLASSIFICATION. THE ENTIRE REPORT SHALL BE UNCLASSIFIED.

PROCURING CONTRACTING OFFICER (PCO), REFERENCE SF 26, BLOCK 5.

ADMINISTRATIVE CONTRACTING OFFICER (ACO) REFERENCE SF 26, BLOCK 6.

DD FORM 250 SHALL BE SUBMITTED WITH THE FINAL TECHNICAL REPORT

DATA ITEM DESCRIPTION

Title: RESEARCH AND DEVELOPMENT (R&D) PROJECT SUMMARY

Number: DI-MISC-81612A

Approval Date: 20031215

AMSC Number: D7442

Limitation:

DTIC Applicable: N/A

GIDEP Applicable: N/A

Preparing Activity: OSD-SO (FOR DARPA/IXO)

Applicable Forms: N/A

Use, Relationships:

The R&D Project Summary reports key project administrative, programmatic, technical and financial data. The R&D Project Summary includes administrative and funding information, research objectives, innovative approaches, accomplishments, plans, technology transitions, technology transfers, and issues. The technical and financial information contained in the R&D Project Summary enables comprehensive assessment of project goals, progress and status. This Data Item Description (DID) contains format and content preparation instructions for the data product generated by specific and discrete task requirements as delineated in the contract statement of work (SOW).

Requirements:

1. Project Information.

1.1. Administrative Information.

1.1.1. Subcontractors. Verify each subcontractor.

1.1.2. Performing Organization Contacts.

1.1.2.1. Principal Investigator(s) Contact. Verify the name, organization, business address, business phone, business fax, and e-mail address of each principal investigator.

1.1.2.2. Administrative Contact. Verify the name, organization, business address, business phone, business fax, and e-mail address of the administrative point of contact.

1.1.2.3. Financial Data Contact. Verify the name, organization, business address, business phone, business fax, and e-mail address of the contact for financial data.

1.1.2.4. Programmatic/Technical Reporter Contact. If the Principal Investigator is not the reporter of the programmatic/technical data verify the name, organization, business address, business phone, business fax, and e-mail address of the programmatic/technical reporter point of contact.

1.2. Programmatic Information.

1.2.1. Project Uniform Resource Locator (URL). Provide the project URL.

1.2.2. Project Description.

1.2.2.1. Research Objectives.

1.2.2.2. Problem Description. Provide a concise description of the problem area addressed by this research project.

1.2.2.2.1. Research Goals. Identify specific research goals of this project. Identify and quantify expected performance improvements from this research. Identify new capabilities enabled by this research. Identify and discuss salient features and capabilities of developmental hardware and software prototypes.

1.2.2.2.2. Expected Impact. Describe the expected impact of the research project, if successful, to the problem area.

1.2.2.3. Technical Approach.

1.2.2.3.1. Detailed Description of Technical Approach. Provide a detailed description of the technical approach that will be used in this project to achieve the research goals. Specifically identify and discuss innovative aspects of the technical approach.

~~1.2.2.3.2. Comparison with Current Technology. Describe state-of-the-art approaches and the limitations within the context of the problem area addressed by this research.~~

1.2.2.4. Schedule and Milestones.

1.2.2.4.1. Schedule Graphic. Provide a graphic representation of the project schedule including detail down to the individual task effort level. Show all project milestones. Use absolute time designations for all dates.

1.2.2.4.2. Detailed Individual Task Descriptions. Provide detailed task descriptions for each individual task in the schedule graphic.

- 1.2.2.5. **Deliverables Description.** List and provide a detailed description for each planned deliverable. Specify receiving organization(s) and expected delivery dates for each deliverable.
- 1.2.2.6. **Technology Transition and Technology Transfer Targets and Plans.** Discuss plans for technology transition and transfer. Identify specific military and commercial organizations for technology transition or transfer. Specify anticipated dates for transition or transfer.
- 1.2.2.7. **Quad Chart.** Provide a Quad Chart as one (1) landscape-oriented page divided into four (4) quadrants and suitable for use in briefings using the following format:

Project Title	
GRAPHIC: A visually compelling graphic that conveys the key technological idea(s) or the expected impact of the research.	NEW IDEAS: List at least 3 new technical ideas embodied by the research.
IMPACT: At least 3 quantitative statements discussing how this research can revolutionize an area of importance to the Department of Defense.	SCHEDULE: At least 2 scheduled events or project milestones per year, depicted on a horizontal timeline with at least Quarter resolution (3 month increments) starting with the Quarter that contains the project start and ending with the Quarter that contains the scheduled project end. Quarters begin on 1 October, 1 January, 1 April, and 1 July. Use absolute time designations for all dates.

2. **Funding Report.**

- 2.1. **Incurred Expenses this Period.** Specify the expenses incurred during this reporting period (direct and indirect costs on the awardee's accounting system including labor, overhead, G&A, equipment purchases, travel, material, and any subcontract charges known by the prime).
- 2.2. **Invoices this Period.** Specify the invoice date, number, and amount of each invoice submitted during this reporting.
- 2.3. **Date Incurred Expenses will equal Obligated Funding.** Specify the anticipated dates that incurred expenses will equal 75% and 100% of the obligated funding, respectively.

2.4. Planned Incurred Expenses. Specify the total expenses planned to be incurred for each of the next three (3) quarters.

2.5. Projected Funding Increment. Specify the funding increment required for the period beginning with "Date Incurred Expenses will equal 100% of Obligated Funding" and ending with 31 December of the next calendar year. If contract ends prior to 31 December of the next calendar year, specify the funding increment required up to the contract end date. Obligated funding increments are additions to currently available funds, not additions to the total contract value.

2.6. Issues or Concerns. Summarize any funding, technical, programmatic and other issues or concerns as well as recommended actions for Government consideration. Indicate if an anticipated funding increment has not been received.

3. Technical Report.

3.1. Project Progress.

3.1.1. Progress Against Planned Objectives. Update the status of the specific objectives identified in the last reporting period as "Specific Objectives for Next Period". For each objective, indicate if the objective was or was not accomplished. For each objective not accomplished, detail the current status of the objective.

3.1.2. Technical Accomplishments this Period. Describe the technical accomplishments made during this reporting period.

3.1.3. Improvements to Prototypes this Period. Provide a detailed, quantitative description of significant new features, capabilities and performance enhancements to hardware and software prototypes made during this period.

3.1.4. Significant Changes to Technical Approach to Date. Identify and provide a detailed description of and rationale for significant changes to the technical approach since the start of the research project.

3.1.5. Deliverables this Period. Report the deliverables (excluding Technology Transition and Transfer covered under 3.1.6.) submitted during this reporting period. List the Deliverable Name, Type of Deliverable (e.g. hardware or software item, demonstration, milestone, design study or other documentation), and Date of Submission. List the Contract Line or Data Item Number (CLIN or DIN), when applicable. Specify the name, organization, business phone, fax number, and e-mail address of a point of contact for the organization(s) that received the deliverable.

3.1.6. Technology Transition and Transfer this Period.

3.1.6.1. Technology Transition and Transfer Description. List and describe the features and performance capabilities for each technology transitioned or transferred this period.

3.1.6.2. Technology Transition and Transfer List. For each technology transitioned or transferred this period, identify the specific military, commercial, or other transition or transfer organization(s) and the application context.

3.1.6.3. Technology Transition and Transfer Contacts. For each technology transitioned or transferred this period, specify the name, organization, business address, business phone, business fax, and e-mail address of a cognizant point of contact for the organization(s) that received the transitioned or transferred technology.

3.1.7. Publications this Period. Provide an electronic copy of each publication sponsored fully or in part by this contract during the reporting period. For each publication, specify the:

- (1) Title
- (2) Author(s)
- (3) Publication date
- (4) Publication venue (e.g. journal, conference or magazine name)
- (5) Publication keywords

3.1.8. Meetings and Presentations this Period. List all meetings (conferences, workshops, demonstrations, and other coordination meetings) participated in during the reporting period that were sponsored fully or in part by this contract. For each meeting, specify the:

- (1) Meeting Name
- (2) Meeting Purpose
- (3) Meeting Start and End Dates
- (4) Meeting Location (place and name of facility)
- (5) Meeting Attendees from this project
- (6) Presentations Made

3.1.9. Issues or Concerns. Summarize any funding, technical, programmatic, or other issues or concerns as well as recommended actions for Government consideration. Indicate if an anticipated funding increment has not been received.

3.2. Project Plans.

3.2.1. Planned Activities. Describe the planned activities for the next reporting period. Discuss the risks and payoffs corresponding to the planned activities. Include a discussion of planned experiments, demonstrations, presentations, and technical papers.

3.2.2. Specific Objectives for Next Period. Report the significant technical and programmatic objectives planned to be completed during the next reporting period. These are dynamic objectives driven by the progress of the project and not necessarily long-term milestones. Report specific and measurable objectives, rather than simple declarations of continued or sustained effort. For each objective, provide:

- (1) Objective Name
- (2) Objective Type.
- (3) Objective Description. Provide a description of the objective in terms of a specific performance capability to be achieved and in relation to project milestones.
- (4) Impact. State the significance to this project or related projects if the objective is or is not met.

END OF DI-MISC-81612A

STATEMENT OF WORK
FOR
PRECISION URBAN REGISTRATION AND DIGITAL ELEVATION
MODEL EXTRACTION (PURDEME)
SEEDLING PHASE

1.0 Reserved

2.1 Statement of Work

2.1.1 Objective

There are two primary objectives of the seedling phase of the PURDEME program: 1) to assess the performance of PRR in urban areas; 2) (b)(4)

(b)(4)

conduct (b)(4) experiments, the results of which will be summarized in a report.

2.1.2 Scope of Work

The work outlined in this section will produce an assessment of PRR (b)(4)

(b)(4)

The research performed will provide documentation of results of registration, (b)(4)

(b)(4)

1. data collected with a number of platforms and sensors.

Throughout this analysis, software tools will be used and/or modified to meet the objectives of the program. However, development will not be the focus of the effort until the second phase.

2.1.2.1 Milestones

2.1.2.1.1 Seedling Phase

The following milestones will be met in the seedling phase of the PURDEME program.

1. Computer System Setup Complete: Occurs after dedicated compute server and storage have been installed and configured.
2. First Data Set Complete: Occurs two months after the start of the program. This data will constitute the baseline set.
3. Additional Data Set Complete: Occurs seven months after the start of the program. This data will address specific cases that raised concerns during the experiments or support some of the more stringent requirements of the later experiments.
4. Interim Performance Summary Complete: Occurs four months into the program and will summarize the results of the first experiment and progress to date on the other (b)(4). The information will be reviewed at the first Technical Interchange Meeting (TIM).
5. Final Performance Summary Complete: This milestone will occur upon the completion of the program and capture the results of all the experiments. The information will be presented at the final TIM.

2.1.2.2 Deliverables**2.1.2.2.1 Seedling Phase**

All software and reporting material developed under the seedling phase will be delivered to DARPA without restriction of its use or future distribution as shown below:

DATA DELIVERABLES	FREQUENCY
Final Annotated Report/Briefing . Detailed explanation of experiment results . Description of innovations . Outline of remaining challenges . Recommendations for the development phase	(b)(4)
Status Report . Fund and Man Hours . Technical Progress and Results . Issues effecting performance	IAW Exhibit A

2.1.3 Tasks and Technical Requirements**2.1.3.1 Seedling Phase**

A description of the tasks to achieve the objectives of the PURDEME seedling phase is contained within the following subsections.

2.1.3.1.1 Data Acquisition

GDAIS will acquire sufficient image and DEM data to perform the experiments necessary to assess the benefits of PBR. The contractor will work with DARPA to determine the best evaluation set. Such data may be provided as Government Furnished Information if so approved by the Contracting Officer's Representative (COR). GDAIS will work with DARPA to identify data sources and have it delivered to the GDAIS MRDC facility. (b)(4)

(b)(4) The result of this effort will be a data set capable of answering the questions posed by the experiments.

2.1.3.1.2 (b)(4)

(b)(4) (b)(4)

This may include sensors from the National Technical Means (NTM), Global Hawk, ASARS, Predator, and SYERS platforms. (b)(4)

(b)(4) (b)(4)

2.1.3.1.3 PBR Accuracy Measurement

GDAIS will measure the accuracy of PBR (b)(4)

(b)(4) The measurement will be based on the difference between identifiable locations within images (for example the top northeast corner of a building) because ground truth is unlikely to be available for this data. GDAIS will also provide an estimate of the CE90 and LE90 error measures. The result of this step will be accuracy

measurements that will allow PBR to be compared to other methods and draw conclusions about what military operations might be possible given this higher precision registration.

2.1.3.1.4 (b)(4)

(b)(4)

2.1.3.1.5

(b)(4)

2.1.3.1.6

(b)(4)

2.1.3.1.7

(b)(4)

2.1.3.1.8

(b)(4)

2.1.3.1.9

(b)(4)

2.1.3.1.1

(b)(4)

2.1.3.1.11 Security

GDAIS will operate in accordance with documented security processes to ensure national security. The data and products of this program will be classified, and will be treated with the care required by the applicable security guides.

2.1.3.1.12 Management and Reporting

(b)(4)

